Introduction and Guest Welcome

Welcome back to another conversation about Reversing Chronic Gut Conditions. I'm your host Sinclair Kennally, and I am joined today by the wonderful Isaac Eliaz.

Dr. Isaac, it's so wonderful to have you on. We're so excited to share your wisdom today. You're an expert on detoxification, on cancer, on immunity, on complex, chronic conditions.

So you're perfect for our audience to hear from. You know, I always love interviewing you and you have your fingers in a lot of pies, you know? So it's really fun to be able to bring a researcher who's on the forefront of what's really going on in health today and, you know, has access to so much cutting edge information.

And it's really translating it to the public in the way that we need to hear right now. So welcome and thank you so much for joining us. Thank you. Thank you. I love our conversation.

The last interview was so great. I'm glad we are back. Me, too. Yeah, exactly. There's always more to discover. So as you know, we're discussing reversing chronic conditions.

We wanted to discuss today, you and I, you know, the pesticides, the dysbiosis and the leaky gut, whole trifecta. You know, how how does the how do these topics relate to each other?

How do we really look at detox and balance and really repair GI function when someone has been unwell for quite some time, you know, so that I invite you to, you know, we're going to open that the the conversation wide today.

Is there anything you want to share before we begin? I know you have some cutting edge information to share with us. So, you know, I mean, it's just, you know, it's becoming more and more of an issue for more and more people.

And the gut is a challenging system to to repair, especially the the absorption digestive, the pancreatic palate. This one intestine part know it doesn't have the regenerative power of the liver, for example, where you cut 60% and six weeks later it's all back and it's really important to understand the gut in a big in to understand the basics that you and I know that you that you and I know that you work so much with and the right principle, but also to take a little bit of a deeper understanding of the symbolism of the gut.

That's really what I want to talk a little bit more about today. Yeah. And I think we can start to yeah. I mean, pesticides are a big contributor to that, to chronic gut issues.

And it's one thing that really nobody asks us, you know, we can live a very healthy life and we don't control our exposure to to pesticides, to environmental toxins, to heavy metals, to mycotoxins with certain things like mycotoxins.

Pesticides, Glyphosate, and Gut Disruption

Yeah, you can make sure there's no mold in the house, but pesticides, you can live in a beautiful place and are spring outside and you even know, you know.

Yeah, it's really a huge issue. Yeah. And I really want to hone in on, you know, the herbicide glyphosate today as well. So definitely so I think I will maybe it's a good place to start because I've made the life of finding a solution for glyphosate in one of my New York was seeds and the reason also we can't look at one pesticides in an isolated level because we got our environmental toxin industrial toxins plastic driven a and or a toxin that affects our metabolism, diabetes and liver function, weight gain, etc.

We've got our environmental toxins simple as is gasoline byproducts from all the planes flying above us. We don't think these planes are burning an enormous amount of gasoline and it's kind of above us and it's heavy.

It's going to fall down eventually and get to us. We've got heavy metals, we got micro toxins, and then we got pesticides, many pesticides. And the quintessence of one is the glyphosate roundup.

First, because of the amount, £330 million a year, which means the pound per person a year, water soluble with the water table, with the with rain, it can go in a flat area ten or 15 miles.

But what glyphosate does, it's not only what it does directly. So in the plant it prevent absorption of nutrients. You can see how the plants dry out.

But while they would say it doesn't do it directly for mammals, it affects our microbiome. And once it affects our microbiome, it affects our absorption and it also affects what we absorb.

So we, for example, can carrying some heavy metals and we don't absorb our regular nutrients. So, for example, we don't absorb the building blocks for serotonin.

And eventually, you know, it's it's going to affect the brain. But staying at the gut for a moment, glyphosate will disrupt the gut tight junction. It will describes it.

It will disrupt the lining of the gut and really creates peace between the cells. What we will determine is leaky gut. It turns it used to be alternative 20 years ago and now is completely acceptable, especially with Siebel getting so much interest in mainstream gastroenterology.

Right. Who would believe? But it is. And we can talk. The solutions are not necessarily the right ones. So now you've got things that are not supposed to get absorbed, being absorbed from the gut, your gut inflammation on the gut level because the microbiome is disrupted.

The moment we disrupt the microbiome, we get more aggressive organism being involved. We got the whole kingdom of the microbiome is disrupted upside down, but then we get absorption of molecules we're not supposed to absorb and naturally they will cause systemic inflammation.

And specifically they will they will cause narrow inflammation. So understanding this, I now want to take a step back and I want to talk about the Survival Paradox, which is really it's, you know, the topic of my book that I finally wrote in this.

Please, please explain for us your book. And I'm going to tie it specifically to the gut today. So the Survival Paradox, as it sound, is a paradox because we are wired to survive.

Every cell in our body is wired to survive innately. And this part of it is part of it. When we when we get a sense of danger, when our survival is in danger, we respond.

We respond immediately through the nervous system, through the autonomic nervous system, which really affects the gut. You know, in the sympathetic system, the fear and fight flight system shuts down the gut because when we're in danger, it's okay, not to send blood to the digestive system.

We need to get blood to the muscles that we can run away. We can get blood to the brain. So you get the sympathetic response, either fighting response, which equates to inflammation or flight and freeze response, which we create to creating a microenvironment, creating isolation, creating fibrosis, dysfunction of organs within a systemic level while this is happening within a fraction of a second, and we can balance it by relaxing and taking a deep breath and all the thing that relaxes.

So a nervous system, there is a biochemical trigger with a protein called alarming protein, especially collecting three, which I've researched for almost 30 years.

We start this survival response and it carries the different inflammatory molecules to places where it's needed. The problem is that once we start the inflammatory response, the biochemical, it doesn't turn off as quickly.

So now we understand the big picture and I want to introduce one more element and then I want to go to the gut. And the element is that every cell is part of its survival, decides what it wants to take in as nourishment.

And what it wants to put out is what it doesn't want. Right. And this is a boundary of the cell as an individual unit. It has his characteristics. It has a personality, actually.

And so this is and within this and we get the mitochondria that will affect our our, our metabolic function but would put it aside. So the cell is the boundary decides what comes in and what goes out through different channels within the cell.

So now understanding this, we're going to transpose it into the gut so we have different boundaries in the body. We get the boundaries of the individual cell because the boundaries of certain tissues and organs and organ gets blood through the arterial flow and puts out blood through the venom system.

And one of the biggest boundaries we have is our skin, right? our skin is very obvious. It's not really hardly permeable. I mean, we have sweat coming out with some chloride and sodium, you know?

Yeah. If we put cream, some cream will get absorbed, of course. But the absorption is very limited and selective on the skin. The most prolific boundary in our body is the gut.

The Survival Paradox and Gut Boundaries

And if we think about it, our digestive system is a hollow tube. We do have some digestive enzymes in the tongue, amylase lipids. It starts breaking down, especially amylase sugars.

We can absorb them some. You can absorb into the buccal mucosa, but mainly once it goes down in the digestive system. But it's really a tube. You can you can take a coin, swallow it, and it will come out in the rectum a certain time afterwards.

And it is never been part of you. It's really a hollow thing. So when we look at the gut and if we open the gut and all the V like it's by far the biggest boundary in our body.

So our biggest boundary, our biggest relationship with the outside world is not our skin, it's our gut. So obviously when there's a relationship, we decide what we want, what we don't want.

We have to have a strong immune system. It selects what we're going to respond to, what we are not too. And this is why the gut is such a big effect on the immune system right there, the post pitches.

And so we often know we make this observation, but we don't take the time to understand why and because the gut has to create its survival, respond with its environment, with 100 trillion organisms more.

There are more organisms in the gut that all the cells in our body and there's 90% of our DNA comes from our microbiome so much more than the whole body.

We have a relationship with these neighbors. Your relationship can be safe and peaceful and everything is good and we will produce serotonin and everything will be relaxed.

And when we are relaxed in our system, relax. The nervous system is relax. And the blood brain barrier is an image of the gut lining. So when the gut lining is working well, the blood brain barrier would work well in molecules that are not supposed to go into the brain.

Do not go into the brain just like molecules are supposed to go. Not supposed to go to a system. Don't go in the

gut. And we don't have no inflammation and we have a great functioning balance.

Parasympathetic dominant, creative, harmonious, loving creature called us. And it's really driven by all these approaches. But when the gut feelings are the sense of danger and it puts its posture of I have to defend myself, it will immediately affect the inhabitants of the gut.

We used to be our friends. A moment ago, and now they sense a sense of stress of danger, and they will respond their response by isolating themselves through the biofilm, the structure that protects them and the backbone of the structure is Galectin three.

In the latest, we will call in different inflammatory compounds, different immune disruptors, so the body doesn't recognize well, it doesn't stop the growth of the bacteria and we get a disruption of the gut.

So we have this vast relationship between what's inside of us and what's inside the gut. It's amazing what is so beneficial in the gut. If we turn it around and put it in our bloodstream, we'll have sepsis and we'll die within hours. Right?

It's a question of being in the right time, in the right place. So this is part of an amazing relationship. And when this get disrupted, it affects us on all level and it's at the root of chronic gut issues.

So what do we absorb and what we don't absorb? Well, physically, we can say like, you know, the gods, the small intestine will absorb, let's say zinc higher in the small intestine in B12, it's a ilium.

But what emotions are we going to absorb? What dramas are we going to absorb, what we think is ours and what we can let go of? So if we look at the skin, the skin is the same skin everywhere, right?

We think about the gut. The gut is a dynamic boundaries. It changes as we move down. It changes forming absorptive quality to an excretion quality. So it can always excrete everywhere, including in the small intestine, by just moving absorption quality.

And then comes this pivotal place where we have to differentiate what we want and what we don't want. And that's a big psychological point to say, what's my and what am I ready to let go of?

And this is done in the earlier cycles, and this is a big immune system issue, right? To know what what's mine, what's not mine. So sure enough, we have the appendix, which is a major immune center.

Right. They're helping us to decide if everything goes well, we will absorb in until the end of the small intestine and we'll start letting go and absorb just whatever in the large intestine and people with issue between nourishment and letting go constipation in early childhood.

You know, things with eating issues with putting pressure on traumas between you will see very early on problems is the cycle gut valve no problem in the ilium problem in the large intestine and yeah medicine we'll call it irritable bowel syndrome or if it's a really inflammatory disease, of course, Crohn's or, you know, all IBS, you know, inflammatory bowel disease, diabetes.

But for us, it's a whole journey of a relationship between the community inside our gut, in us, between our world and the world around us. And when we understand it in this way, we can shift from a survival to an to an embrace of embracing harmonious place.

Naturally, our gut will really react. And, you know, people say, I can feel it in my gut, right? We can feel in our gut more neurotransmitter produced by the gut.

By the brain. 90% of serotonin is produced by the gut. So this is a little bit of a bigger understanding. And within it now we see what is going to disrupt this harmony.

So life as a the king of disruptors and pesticides and mycotoxins and heavy metals and food that is inflammatory and stress that we are trying to to today.

Is it all create a mixture and each of us have our own combination and each of us is a combination that will unlock the lock and all these factors come into this amazing journey.

And once that gets better, everything gets better. You know, in Chinese medicine, it's the school of for the spleen, stomach school, the digestive school.

When the digestive gets better, everything gets better. I think that's so beautiful, what you just laid out, because you really took the time to unpack for people what a healthy gut looks like and how everything plays its own role when all is well, and then the disruption that occurs, right, and where things can become out of place.

What I really appreciate about what you just did is sharing how these external disruptors, as they come in, necessitate an immune and microbial response right.

And they cannot go on ignored. So, of course, we're going to have these persistent gut issues. I think my favorite thing about what you just said is that is really helping people to tie in the understanding of their emotional response to what's going on into the gut and how to get us both driving that and, you know, trying to respond to what life is throwing at it.

Because so many people come into our practice and I'm sure you see this as well, so many students, etc., where they're like, yes, I have, you know, these persistent gut issues and I have this whole body inflammation and I have these psychological issues and like, well, wait a minute, it's all the same thing, you know?

So can you speak to that a little bit? Yes, of course. So there is an understanding, a differentiation, very developed in Chinese medicine and Vedic medicine, Tibetan medicine, where certain emotion relates to a certain organ in the India and even where things in the gut will really affect you.

It's a whole, whole array. And within it we really want to see what is disrupting our system. And there are things that are easier to address compared with things that are harder to address.

For example, if we have a lot of inflammation, we can block galectin three with more infected respect and it will affect gut inflammation over time. We now have a way to remove glyphosate.

You know, it was a crusade and I'm just we just finished our second year of clinical clinical data and we definitely have something that will play for that in practically everybody.

Like, you know, 12 out of 13 people. And so we have now we have something to address in a way that in a way that thing that we don't have control over.

Emotions, Trauma, and Digestive Function

But then we can look at different emotions in which emotions affect us. You know, if we have a hard time digesting things, you know, and which either produces obsessiveness or impulsiveness, this is a little bit regurgitation of our thoughts, of our feeling will happen in the gut as well.

The gut will not move. So whenever we have an emotional movement, we will also have a physical movement. I, i, i, I haven't put it in my book, but one of my most favorite patients that is, I give the example about him in my chapter about the heart is survival of the heart.

He was a he was a Vietnam vet pilot officer who got shot eight times in one year. So there was a lot of trauma. And when we did a certain meditation that helped him to transform the traumatic experience into love and compassion.

And then it was just in a day. And then he went home for the night and he had pain from the cancer for a few years.

Then. And then he processed all these different traumas during the night and really in the morning he had the biggest bowel movement he had in his life.

Literally like two feet, I thought. And his pains were gone. Did not come back until a few years later in the camp, like five or six years later, when the cancer.

So this is an example of processing, of holding on because we hold in the gut, right? You think about holding what is not ours and not letting go. You know that's it really affects our health in the gut is is really is really like the canary in the mine who will tell us that something is not working when they try.

For example, the gut has its own peristalsis, its own rhythm. And for example, jet lag is highly affected by the rhythm in the digestive system. That's why if people want to have less of a deadline, you really don't want to eat while you're flying, like do a 16, 18 hour fast and then the gut gets to restart and and and reestablish the lot of emotions that relate to different organs in the body.

We don't have enough time to go over them, but the gut plays a big role in the gut, especially plays a role in that dialog between nourishment and letting go.

So it's specifically important in that in the seasonal basis, the biggest season for the gut is the fall season. Because the fall season is when we let go of the leaves, fall of the trees, the day gets shorter, things come to an end, the day there's less light, it's a time to just let go.

And so the point is people will see a direct connection between the emotional ability to let go and the relationship with their digestion into their very interesting relationship between the gut qualities of the large intestine and the bladder that let go, urination wise.

So these are these are some some some basic connection. But on a practical level, we have to understand that when we insult the gut, when we insult the microbiome, it will react for some people will be a microbiome imbalance or some people that create microbiome derived inflammation.

And for some people it would create actual inflammation of the gut itself. And that's where you really get into more serious illnesses. So when we can clear so the most important, obvious things to clear in the gut are this chemical toxins because they are there, even if we clear our emotion, you know, but there is a high concentration of mycotoxins and pesticides and aggressive bacteria and mold.

It's going to create inflammation. You know, we may be a little bit less risk, less reactive, but it will. So we do have to address it. And that's a very important piece.

And of course, I'm showing the summit. People are talking about diet and an anti-inflammatory diet and how to eat proper and the right fiber. And I'm skipping this off, assuming but I want to talk about got.

A covered 1 to 0 in a year. Yeah. Yeah. I want to talk about more more on that on this on this. Deeper, deeper level of understanding the gut. And into it comes our new our new buzzword in the last two or three years, which is civil.

Right. Everybody there's so much zero suddenly. I mean, it's not like there wasn't civil before, but now it's recognized. But now we have a new test for it. So.

Exactly right. Like, for example, lipoprotein is a very nasty lipoprotein that cause disease. I check it on every patient since the early nineties. Nobody checks it because there's nothing to do about it.

What you still need to know about it. So if we look at Sybil, why is simple? Simple is more prevalent, there's no doubt. And why? Because our biodiversity is going down.

And when the biodiversity goes down, when there is less intelligence, it is a community is less balanced, it then certain trade gets more dominant and different.

It can be disrupted with antibiotic therapy always overuse of certain probiotic of the different component there. But it doesn't mean that we don't need to get the right pre probiotic because if you give the right nourishment to the gut, the body always wants to survive.

The microbiome always wants to survive. If you give the microbiome and the by the body good quality nutrient, they will produce a good quality microbiome.

So when it comes to Siebel, the lack of biodiversity is also a reflection of our inability to hold in here somebody else opinion is not ours, you know.

We are so divided. Divided. We are so divisive. We are so opinionated. Right. And and and COVID really took it to draw to an extreme in the political and the geopolitical divide.

So it will naturally affect our microbiome. And, I mean, reduction in biodiversity of the microbiome is huge, just like reduction in biodiversity on a global scale, you know, plants and, and, and ocean and fish and algae, etc., etc..

It's all different layers of the same issue. So the real solution with Siebel, if we can, it's not easy is to recreate the biodiversity. Yeah, some people we need antibiotics, but they will get better.

Very temporary. I mean, I make your point not to treat C but with antibiotics and I mean I don't kind of see by my cancer but masaba patients get better the beauty that once they get better, they get better because everybody.

Yeah. So in this sense we also have to think where is where can the digestive system get insults, bacterial microbiota or microbial insult into the digestive system kind of from left field.

And one of the most important places is our maxillary sinuses. And so it's important to know people with digestive issues. So in many medicines this area relate to the digestive area anyway.

It's kind of unrelated, but related. But if we think about our sinuses, our sinuses, like poorly ventilate, heated basements that are closed, right? They don't have good airflow.

And especially if the ears get plugged in the is no, no no good movement in that other fairing. There's no good drainage. So we get these places that are damp and cold.

And last I've checked, mold doesn't grow in hard to dry weather. Right. So a great area for fungus to grow and for more toxins to grow and for different bacteria to to really grow and it just drips into our digestive system.

Thank you so much for saying this. I can't believe how many people overlook this. You know. You really cannot help the CBO without addressing the. So there are many treatments.

One of my favorite with me, which is not so easy to do, requires some expertize. You go through. You go above above the teeth into this into the sinuses.

You use some broken ribs and we use some ozone. Know the ozone is air just goes everywhere and basically sterilize this. So it's really like taking our basement and opening it up and in throwing fresh air and they're just cleaned it up and wow, it is such an effect on people.

And of course all the sinuses are connected. So something you're doing and another area but people with severe SIBO, you got to address the sinuses because this is your reservoir and often, often there are tendencies for sinusitis because the sinus is a great area to store traumas much better than the gut and the reason is that it's not ventilated.

So we can we can stick a trauma in the sinuses. And it's not going to be nobody is going to shake it away, just like we can store traumas, infected tissues, because they don't break down as much.

You know, people who go into fasting often have memories come out right. But also insights come up because stuff it has been heated come to the surface.

So in this is when you clean the sinuses, there is a very deep there's a very deep letting go.

SIBO, Biodiversity, and Sinus Connections

Now, often simple measures will work and using some of the of the product like, you know, like like for detox this product developed for removal of glyphosate and depict a somewhat effective perspective often for people where it's affect them in a more in a more serious way.

Then I specialize in a process called therapeutic services where I actually filter and kind of consider the a global disrupter in the field because I use a.

Little bit of a cowboy there. For, you know, because I use it for inflammatory conditions. But I am I'm part of the system and I got a very large engaged grant to study.

So I'm a bonafide researcher in the field and understand the importance of researching it and using devices that really have the value to regulatory quality.

When you're filtering your blood, people will be able to cavalier about using things they would not necessarily went through towards the safety. But what you do is you take out all the all the oxidized lipids and it takes out some heavy metals that make or toxin and growth factors and it really reduces the burden to clean the sinuses and then you catch it in the blood.

So it's a more extreme treatment, but it's important. But people whose sinuses are very congested and then an infected will, naturally it will affect the eye.

I issue macular degeneration and in different issue or autoimmune conditions, but also will affect the cognitive function and security of the frontal lobe.

I mean, you know, the smell comes right there through the through the tube from plates into the brain. So any infection, any issues it will affect our mental function.

People know, right when you are when you have a lot of phlegm, you can't think clearly. Right. I mean, what is the thing about not thinking clearly, but it literally it affects our oxygenation, our function within the brain.

So so, you know, we went through a journey of the gut, the sinuses and the brain. But it's so obvious this brain gut connection is not like a big discovery.

We have our physical digestion in the gut when we break food and then we use it in different parts of the body. And then we use a different component to create new enzymes.

Right. And, and we have the same thing in the brain where we take information, we digest it, and we recreate it through memory, through mental function.

So these are really interrelated system. And this is why gut health and brain health are synonymous. And that's why there's so much connection between Parkinsonian gut health and, you know, in many, many different dif different condition because the same abnormal inflammatory process in the gut that will be triggered by Galectin three, this protein that carries the different inflammatory cocci to create this biofilm will happen in the brain.

So the Alzheimer plaque is 10 to 20 times more galectin three than normal brain tissue, similar to what we will see in an inflamed tissue in the gut. So this is really nice because when we really address the gut, it helps our brain and when we add resources mentally it helps the gut and it's a great basic relationship.

We are talking today about chronic gut health and these are these are key factors that really will save us a lot of headaches and medications. So you just brought up two terms there and we sort of breezed by them a couple of times.

I really want to give you time to unpack them. So you've referenced BioFilm. You really want the audience to understand, you know, the issues surrounding BioFilm.

And, you know, we talked a little bit about the causes of why biofilm would proliferate. But if you could spend a little bit of time on what is biofilm, why is that an issue?

And then you've also mentioned, you know, the the pedestal, see, like at the end, the galactic relationship, if we could just make sure we take time to cover both of those terms that people really think we mean.

So the Galectin three is the what they call the survival paradox protein. It's an it sits in a lump in the body and he tries to repair the injury and repair it biochemically in the same way that the autonomic nervous system responds with fight or flight.

It repairs by creating inflammation or creating fibrosis, hardening of the tissue by creating microenvironment. So this microenvironment can be an arterial sclerotic plaque in the body, in the arteries.

Also, bacteria and viruses can hide. It can be a place where cancer will hide them. It can be any kind of and of course, it's a place where bacteria uses the biofilm to become less and less.

So the body cannot really get to it. So in the gut, the microbiome is the biofilm can be harmonious. Where it's a structure of galectin three with many different ligand, many different component.

Think about it like a beehive. Okay. Is the structure like? Like the honeycomb? And then things come and go and come and go and come and go. And it's all moving and everything is great.

Then suddenly there's the threat. The threat the biofilm puts in it shield. And when the threat, the aggressive bacteria take over, but to become more aggressive.

So, for example, when you blow galectin three antibiotics therapies work better a more effective restricting the is a prebiotic. It reduces the aggressiveness of bacteria.

It blocks the growth but it also makes regular treatments. Works better because the Galectin three creates this isolation in picked up soil, breaks down the isolation, and now the body can deal with the issues.

So we see it in lab, for example, in very different area in recurrent prostate cancer, where the prostate is taken out, there is no PSA, but it comes back because prostate cancer is growing back.

You use modify to respecting it exposes the new cancer in the body takes care of it. 90% of the patients get benefit nine zero in a multicenter trial that's in early cancer.

In a similar concept, the same thing happens with the biofilm. So if we can if the bacteria will feel safe, it will know to be aggressive. No. When does it feel safe?

When we have good quality nourishment. When we do it, we notice spikes in and sugar level. When we don't have toxins that suddenly disrupt the function and the role of the microbiome.

And the microbiome is our friend needs a remarkable one of the most common common chemotherapy. We amazing if we take antibiotics it will not work because we need the microbiome to activate it.

Immunotherapy in cancer, the effectiveness relates to the level of balance of the microbiome. Now it's acceptable. It's being tested routinely in oncology.

I mean, who would believe my gosh, it's like it's like incredible. But there's a recognition of this relationship. So look at the we look at the biofilm like it's the structures that all these multiple organisms live in.

If everything is ammonia, ice, it's like a beautiful town. And there are restaurants and coffee shops and beautiful scenery and people come and go and you come to visit and you go away and everybody feels safe.

Once it goes into a war, then everybody goes into war and nobody wins in war. Nobody geopolitically in war, and nobody wins healthwise in a war because it produces inflammation and it burns the field, you know.

And so that's really the role of the object of the biofilm. And a similar concept happens in the brain through immune cells that turn inflammatory. And this was the microglia.

So the microglia are the clean up cells of the brain similar to the macrophage in the in our system that get triggered by galectin three microglia get triggered that there is a danger is by collecting three and other things and they produce an inflammatory response.

And the inflammatory response is devastating for the brain. And we know when we for example, when the brain doesn't get enough, enough oxygen, it's called perfusion injury, there's not enough profusion of blood reperfusion even for a short time, it will respond with an inflammatory response.

Mm hmm. Driven by Galectin three. We put, modify it, respecting it. It attenuates. It can. So it reduces the response. So you can see this dynamic relationship.

So really, the biofilm is not a bad thing. It's just a structure that can change its character based on how safe it feels. Just like a cell. A cell decide what it's going to absorb based on how it feels.

If the cell feels very safe, insulin receptors work very well. Ampk Ideology Monophosphate kind of is activated. This mitochondria is totally open. Mtorc1 is shut down for people to know and then PD works well.

We take from one glucose 36 ATP, no byproduct, no lactic acid. Everything's great. The cell goes into a dangerous mode, emotionally toxic. Everything shuts down, insulin receptors gets blocked, the cell feel like it doesn't have nourishment, it goes into crisis exactly like the biofilm.

And then it use it. Alternate glycolysis can produce energy 100 times faster, but only 5% efficiency. So, of course, a lot of byproducts. So we see this thing on the third level, but in the body from the point of view of feeling the issue, I think that the gut leads the way because when the kidney has these issues of inflammation, you're going to find about 30 years later when there is kidney failure.

Right. Suddenly it suddenly took 30 years. You just didn't know because you have so much reserves of the Canadian feeding crisis in the gut. We find about it in 5 minutes. Right.

So the gut is really like is really like our really our our alarm to to the dynamics because it is such a prolific relationship with our environment. Just like the cell puts receptors to decide what to take it or not.

To take the gut lining. We live a relationship with the outside. The beauty is because the gut lining sheds every few days we have a choice. We do have a choice.

You know. I really appreciate you bring this up because, you know, when you look at the body, I just astonished at that. Not just the proliferation of how many people are sick with persistent chronic conditions over years and decades right now.

That that in itself is, yes, very eye catching, but it makes sense.

Biofilm, Galectin-3, and Chronic Inflammation

But when you look at how resilient the gut lining actually is, you're really talking about recreating the problem every couple of days, hour by hour. We're recreating it because the root causes have not shifted.

That's a great point. That is not is the answer for because why would the gut recreate a problem? Because just like we we have habits. The gut has habits all about habits.

And we have an unhealthy, happy and unhealthy responded the gut head for 20 time because it needs to survive. The response will become automated and we will recreate it.

And that's why it brings awareness to change. And we talk today about all the components. It can be emotional, mental, psychological, psycho spiritual, getting rid of toxins, whatever works to change the habits and the and once because the gut needs to eat to regain its flexibility when the gut gets rigid, when we get too habitual, when we get too opinionated, we get too constipated.

You know, we get the whole thing right. It's the same. It's mental constipation. So we have to create a flow. We have to create a flow. It really ties together. It's amazing.

So I would love to unpack that a little bit because I remember vividly feeling like I was totally without hope when it came to my gut issues that I, you know, I'd gotten the short end of the stick with my body and I was just stuck and I was down to three foods.

I just was ingrained emotional dysregulation, reigned, anxiety, yadda, yadda, depression. And I remember how difficult it was to piece together the solutions out there because there's so much noise and all these short term cleanses that don't work.

They might artificially suppress symptoms in the short term, but they really don't get at the root cause and unpack this entire situation, you're so beautifully laid out.

So if someone has really been sick for quite some time with long term gut dysregulation, where would you suggest they start? So it's a great, great, great question.

And really and what is what is the best way to do it? So the place to start is with patients. And then I'll tell you why. Because people we've got people, people with gut issues, especially if they have micro toxin or they have muscle activation is a new buzzword.

These people, you them a product or food, and they already take the label and they are looking for the reason why they are going to be allergic. Mm. They decided they're going to react the moment that they decide that they're going to react, they already reacted in the mind level.

So remember the gut is a healthy gut is a gut that can absorb things that you were not able to absorb before. So the classical example, many of us know people who are gluten sensitive.

You go to Italy and you can't resist eating pasta and suddenly you can eat pasta. I mean, you hear it hundreds of people know gluten sensitivity. You come back a few days.

It can be way because you have glyphosate in the wheat in the United States in your life that is illegal in Italy. So you don't have this irritant. So so the first thing when we start cleaning our diet and getting rid of the toxins, it's okay to have a reaction.

It's not the end of the world. What do I mean? The reaction is one thing. Our reaction to the reaction is really the issue. Yes, excellent point. And it's hard to do this because just like habit, people get attached to their illness, people get attached to a certain visit.

And dynamic is difficult as it is. It is it becomes known, it becomes comfortable because we know what to expect. So sometime, you know, like we'll give our members people that they took the pictures with, with glee for detox and

it was, oh, my God, you cannot imagine it's bloating and gas and what else?

Oh, my memory improved. I don't have headaches anymore. My vision is better, but men's the bloating was so bad, they stopped it. Really? I mean, you're serious.

You have this problem for three decades and they went away. Your microbiome is changed, the bacteria are changing. Things are going to change. Take a deep breath.

It's going to take time. You didn't get sick overnight. It's going to take time for it to really get better. For some people, it's dramatic. No one thing about it was survival response.

And we see from a clinical trial utterly convinced that oncology has paid attention to it. So we had two patients. We know a prostate cancer study didn't respond in the first six months to motivated to speak to now they are supposed to be out of this time.

Some of them decided to continue the field in response and they started responding at ten months and they're responding for years now. It takes time until we flip our survivor response because don't think whoever is listening, don't think for a second the survival response is a buzzword.

It's a biochemical process. It is cytokine storms. It is TNF-alpha Interleukin-6. I've shown in my NIH funded research when I blow galectin 3, Interleukin-6 does not go up.

Later on, I stop the process. But because of how we are structured so people change fast, some people change slower. So we need to have the patient and we need to understand the strategies.

One, we got to clear the toxicity from our body and it's not only the gut. We have to support the liver gallbladder approach. We have support the bladder approach.

If we want to help our liver do something Freud, saunas So some toxins come out of the skin, use some brushes, you know, to really take out toxins, do some deep breathing, make sure you get really good hydration, use enough fiber, eat enough, just vegetables in principle.

Forget about the details. Evening. Okay. So now you are getting nourishment to the system and it's a dance between cleansing inhibition. And first we have to cleanse more and then we need to nourish when come to this work, the first thing we do is we exhale and cry.

We need to go to cleanse. The last thing we do in this world is we take and exhalation and we develop a body. So we are defined by letting go. Letting go is the basic process.

So the letting go emotionally, psychologically, toxins are key, but also letting go of the idea that we cannot get better. Really, we got to I know it from my own experience.

I got really sick with with long COVID because I taught the meditation retreat while having COVID, which was not smart. I got really, really sick and then I saw a lot of I was really sick and there is a lot of yeah, I used a lot of freezes and other stuff, but then it was really an idea that I just letting go of this, you know.

And then I woke up in the morning, it was a different person. Roger They are not some left brain because I was really sick, I almost died. But and I make it 160 miles an hour, you know.

But the idea is it letting go?

Healing Strategy: Patience, Detox, and Letting Go

So letting go is a meditative approach. You know, it takes a lot of training. It's not is easy, I've learned, because sometimes I'm able to do things because I'm trained for decades and it doesn't transfer easily to somebody is not a

strain.

But eventually all of us have the capacity for me took a long time to get trained. Some other people they are lucky because faster. But letting go is key for the health of the gut.

It's key because the moment we let go, there are all these all these villi in the gut. Relax. There's more space, right? Letting go is is creating space, which is great.

If we have if everything is sticking the small intestine, we can absorb. Of course, there's going to be anaerobic bacteria and byproducts and toxins hiding there.

Not all is villi open up. It's like a beautiful, you know, coral coming to life in the ocean. Right. And then, of course, all the fish are going to be happy and all the nutrients are going to flow.

That's right. If you look at the image of the gut, it's really way, you know, you know, the beautiful villi with the especially we do the staining, so we want to create space in the gut.

So when we go in, we take a deep breath. When you do it at home, feel that your gut is you can literally feel it like the gut you like you go like this and it turns over and suddenly it's you.

It's it's endless space, you know? And now when you're in the space, there's more oxygen, there is more nourishment. The sense of, Oh, my God, I'm choking is not there.

But here you are, feels more spacious. You don't have to fight with the neighbors for space. It's really how it works. That's what my that's what biofilm is.

I mean, I'm describing to you, I am describing physiological processes in a little bit of a poetic way, you know, but that's really what it is. I'm so glad to hear you highlight this part, because I think that even those of us practitioners who have been through hell with our own chronic illness journeys can forget this piece.

And I'm reminded every day by our clients and our students, you know that when you're in the thick of it, it's very difficult to let go of the story around it.

You know, I had I took years. I mean, I was sick for decades, took years to heal because, of course, I did all the wrong things in the wrong order. And then I was finally symptom free and I had a huge bike accident.

And as somebody with Hashimoto's who didn't heal for years, I went into this huge assumption that I was never going to heal from these injuries. And it was really interesting to observe and I had to work through that.

And then I got exposed to mold the next year and rapidly put on weight, went into fatigue, was like, whoa, we figured out it was mold. And I had to and I had again the same set like, oh, I'll never be well because mold ruined my life before and it wasn't true because I had the resources and the responses.

But you really do have to retrain your expectation totally. You know, really have it's so easy to get caught in the concept, especially when we know a lot.

You know, one one of the things that happened right when when a patient in oncology, especially when I like I would never I don't even think how long a patient is going to live it, if not even not a thought.

Who am I to know how long a patient is going to live? But somehow now it's done less. It's nice, but the patient wants to know the oncologist because they know the five year survival.

I mean, it statistic doesn't matter. Each person is a universe on its own, but it's really a process of letting go of. And now it's not theoretical because the only truth nobody can argue about is that everything changes the time.

It's an absolute truth. Quantum mechanics and, you know, and different philosophies. Emptiness and Buddhism. It's true. Everything is in a movement we can't hold to time.

We can't hold to reality. If everything is changeable, then everything is possible. And that's really the only truth that we can hold to, is that there is nothing to hold to.

And when, whenever we can really get into this flow, then anything and everything is possible. It's really the truth of it. And one of my most favorite sentences, which I may have told you before, is not everyone is going to be a miracle, but anyone can be a miracle because everything is changeable.

And so many of us have experienced our miracles. And sometimes they are small, sometimes they are big, and often they are not what we expect. The answer can be very different than what we planned in what we expected, but it will still be a change and we have to be open to the idea that the solution may be different than what we thought and the gut really responds to it.

And today we talked a little bit about this idea that each part of the gut is a different property of absorption and what it absorbs. And this is this is symbolic.

You know, it is we tend to go into all the symbolism of God. So I really want to I really wanted to date to to color the multi dimensional part of the gut, to not just talk about this cleansing, that gland in this colony because it's okay.

It's important, but. It is good. It's good. It's essential, but it's bigger than this. You know, Dr. Isaac, you're one of the few people, I think, in the entire world that can speak with such grace and detail and all these layers of consciousness and experience.

And I'm so grateful for you sharing this today. And I know we talked about, yes, the 3D and it's very important, this biochemical bioelectrical piece.

But I'm so grateful for you as a doctor, as a researcher and as a meditation teacher, bringing these layers of consciousness together so people remember the complexity, the depths of who they really are.

Thank you. Thank you. I love talking to you. I mean, I'm looking forward for the next time. Yes, absolutely. Thank you so much.